AUSTRALIAN SOCIETY FOR LIMNOLOGY INC

NEWSLETTER

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MEMBERSHIP DETAILS

The Australian Society for Limnology Inc. (ASL) is an association of over 400 people with professional or amateur interests related to Australian inland waters. Since its inception in 1961, the society has played an important role in fostering limnology in this country. The ASL promotes liaison between limnologists in academic, government and private institutions and has a vested interest in the conservation of aquatic and related resources. Annual conferences are held near centres of limnological interest, and the programme includes scientific sessions, field excursions and social activities.

The ASL regularly produces a newsletter with notes on limnological activities, articles of general interest, book reviews and announcements of upcoming events likely to be of interest to members. Occasionally, it produces a Special Publication series and a Directory of Members.

Membership applications are welcome from any person with an interest in limnology. Five classes of subscribing membership are available:

Ordinary members	$ 25.00
Student members	$ 12.50
Life members	$200.00
Institutional members	$ 30.00
Sustaining members	Fees on application

Membership covers the period from 1 July to 30 June and all members receive the regular and occasional publications produced by the society. Members may also choose to receive the Australian Journal of Marine and Freshwater Science, the Australian Journal of Zoology and/or the Australian Journal of Botany at special reduced rates. The subscription for each journal is based on the calendar year in which the subscription is paid.

Enquiries relating to membership should be directed to the Membership Officer:

Mrs Margaret Hart
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Ph. (03) 5604406 [FAX: (03) 5604406] - No, your eyes are not wrong! They are the same number - another wonderous item of technology has entered the ASL arena - the multi-user friendly FAXPhone.

CONTENTS

Editorial 2

Prattle, Rumour and Scuttlebutt 4

Notices 17

60 Minutes 21

Will the Centres Survive? (ASL letter to LWRRDC) 23

The President's Report 1991 25

Hilary Jolly Award 1991 29

Student Prize 1991 30

Door Prize 1991 30

NABS Report 34

Aquatic Botany Galore! 35

Announcements 37

Bibliography 40

Executive members and addresses 43

Material for the December issue should be sent to the editors before the 29 of November.

Contributions are welcome on any topic. Articles should be forwarded as unformatted text on disc, or as formatted text in any commonly used word processing package. All those with Macs, your discs can be sent to Leon. Camera ready copy can also be sent.

Cover: The cover shows a fish design from prehistoric Mimbres Indian burial bowl pottery. The Mimbres Indians occupied the Mimbres River Valley from AD200 until around AD1150 and co-existed with the Chihuaha chub. Why designs of fish were so often used on Mimbres Indian burial bowls (about 1/3 display fish patterns) is not known.

Editorial

FINE, BUT WHATEVER HAPPENED TO THE 'GOANNA BROTHERS'?

Ah well, another Congress down and it was one of the best yet. The quantity of high-quality research presented has increased markedly since David Mitchell pointed out the Mickey Mouse nature of much of the limnological research that made it through the alcohol fumes at ASL meetings in the early eighties. ASL Congresses have always been open and friendly (except for a few famous incidents), and we hope that tradition continues alongside the healthy degree of scientific "oompfhh" that is manifesting itself. In addition, there seems to be a vigorous crop of new graduate students developing in most centres. We look forward to their participation in other ASL activities in the near future (like the ASL Executive, hint, hint). Supervisors and students should note that Student Prizes will be increased in value and number from next year. See the article later in this issue.

Child-care at congresses is another issue which indicates that ASL is catching up with the latter half of the 20th Century - about time too, there are only 8 years left. The questionnaire included in this issue was compiled by Sabine Schreiber. Please complete it promptly and return it to Leon Barmuta so that the organizing committee for the 1992 Congress can set things in motion.

Amidst all this hubb-bubb, the silence of the membership is truly deafening, not to mention mystifying. **MONEY** - has that got your attention? A reminder that ASL Executive has agreed to make money available to organisers of workshops or special meetings or visits by touring limnological big-wigs. The Executive would like to say it has been deluged with requests. That is, they would <u>like</u> to say that! So get deluging, folks.

And politics. If limnologists stay quiet on issues that affect our ability to conduct the high-quality, scientifically sound research that will be needed in the years to come, then water management will revert to the grim days of being based on glossy presentations covering up appalling data. Bodies like FASTS have been silent on limnological issues because we haven't asked them to do anything for us (until recently). Unless we do start lobbying through FASTS, or making our voices heard inside LWRRDC by lobbying its Representative Organisations, then Canberra could be excused for thinking that limnologists don't exist in this country. To represent us fairly and effectively, our Executive needs to hear from us, the membership. It also needs to hear from us about how it should go about these issues. Is FASTS fast enough?. If we don't use FASTS, and can't afford our own Canberra lobbyist, how do we get our message across? Each state and territory has a member on the Executive; they are only a phone call away. Our

president, Stuart Bunn, is already wading in on our behalf, so it's time to wriggle out of the leopard-skins, donn the gumbies, and get gurgling.

Start singing:

"A long, long time ago
I can still remember when
The music used to make me smile.
I knew if I had my chance
Then I could make those members dance
And maybe, they'd be happy for a while"

(*Apologies to Don McLean*)

Whatever happened to "The Goanna Brothers"? Those members lucky enough to attend (and remember) the ASL annual dinner at the Narooma conference will no doubt have been impressed by the quality of the entertainment put on by the band. They started country, descended even further into pop, slid into the rythym 'n' blues set, sort of slimed into rock, slowed it down with folk, and ended the night with hard-core punk-thrash. If that didn't get your toes tapping, you were either dead or ... er ... or Too Drunk to Something (as the Dead Kennedy's once so eloquently put it).

Not wanting to pick on the conference organisers since then (they have invariably put on well-run shows), there has however been a decline in at least one aspect of the organisation. And that is the music. Put simply, we need more bands like "The Goanna Brothers" to entertain members at the conference!

This then, is the challenge to the conference organisers for the Hobart extravaganza. Get out there into the clubs and pubs. Check out the local musical talent. There must be other bands out there that can rival The Goanna's. Make the Hobart Conference another one to remember by finding a decent band for the after dinner entertainment.

Meantime, your editors thank you all for your kind words of encouragement and support, and we thank our correspondents for helping us fill the Newsletter and making it newsy, friendly, frank, and fun. Donations of fine, dry red wine to the Keep the Editors Smiling Fund will be gratefully accepted.

Editorial Addresses:

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PRATTLE, RUMOUR AND SCUTTLEBUTT

VICTORIA

Correspondent: Barbara Downes, Department of Ecology & Evolutionary & Every Other Kind of Biology, Monash University, Clayton 3168
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This will be short and sweet, partly because I suspect that most people will be still "gossiped-out" from the conference but also because I'm heading o'seas well before the deadline for this newsletter.

Of interest to limnos grappling with freshwater algae will be a FAX sent by Tim Entwhisle, who's at the National Herbarium of Victoria. Tim writes:

"It is probably about time that I acknowledged my whereabouts and behaviour. I have just finished writing up Allocasuarina for the forthcoming Flora of Victoria, but that has nothing to do with limnology. What does, however, is my continuing work on the taxonomy of freshwater macroalgae (I am allowed to devote about 25% of my time to my first and true love). I no longer dabble in ecology (much to the relief of certain reviewers I'm sure), leaving me free to do plain old taxonomy. I have finished writing up the description of a second odd red alga from the pre-drowned Lake Pedder (the first was an intriguing new genus known only from Lake Pedder and the Barren Grounds Bird Observatory near Woollongong - I never could understand biogeography), so you can see how up to date we are with the taxonomy of macroalgae. Other on-going projects include: a monograph of the freshwater red algae for Australia (some 15-20 spp.), plenty of new records (for Australia) of green algae, and a guide to the 60 or so species of freshwater macroalgal genera in Australia (see note about ASL special publications in last newsletter). Apart from that, I am busily hunting for any collections of weird and wonderful freshwater algae (mainly the biggies), and dabbling (warning bells!!) in phylogenetics with my Gondwanaland connection in Brazil (Dr Orlando Necchi). [Gee Tim, didn't know you'd traced your family tree back that far - does the herbarium really know how you're spending your time?] Then back to Caladenia, Lastreopsis and the rest of the (dry) Victorian flora."

Meanwhile, further south of town, Keith Ferdinands has sent in some details of the activities of the Dandenong Valley Authority. The Authority has begun a biological monitoring program at Dandenong Creek that will complement its existing physico-chemical studies at said creek. Common with many other urban creeks, Dandenong Creek has been subject to "construction and maintenance works associated with flood prevention and drainage capacity, including flow diversion, flow regulation,

channelisation, pipelines, culverting, concrete-lining and bank improvement" not to mention pollution from "industrial sullage, untreated sewage and urban and agricultural run-off". Surprizingly, there are still some animals left to count. Water quality in Dandenong Creek has improved since sewering of the catchment area and regulation of industrial releases in 1978, and the Authority is now producing a comprehensive species list and determining what factors, biological or physical, are regulating abundances of macroinvertebrates. However, the next few months should be interesting, with the amalgamation of the DVA with the MMBW in yet more of the musical chairs that is the trademark of the Victorian public sector these days.

Some snippets from Monash. Two more naive Honours students have been lured into the limnology sector. Natalie Fishwick will look at direct and indirect interactions between waterbugs of 2 kinds and trout in the Lerderderg, and Paula D'Santos will try to find out whether chironomid cases act as strange attractors for other species (hence possibly counteracting the well known negative effect that chironomid cases have on limnologists).

NEW SOUTH WALES

Correspondent: John Hawking, MDFRC, P.O. Box 921, Albury NSW 2640. Ph. 060-431002, Fax. 060-431626.

CSIRO : Division of Water Resources, Griffith.

Kath Bowmer has moved into even more rarefied air since becoming Assistant Chief of the Division in July. To maintain her stakes in the labcoat laundry and options on bench space, she is starting a new project on river pollution with agricultural chemicals (pesticides). Advice on whether chironomid mouthparts are affected will be provided by the entomological Flying Doctor, Vince Pettigrove. Jane Roberts is processing data collected during the summer of 91 from the lower Lachlan River, surrounded by piles of pressed newspapers and broken leaves ("I hate grasses"). She is now waiting for the creeks of Binya Hills to start flowing, and has meantime been doing some crystal ball gazing (dangerous) by co–advising with the legendary David Mitchell (MDFRC) on how useful and how easy it might be to re–plant Lake Mokoan. Gary Jones has just been to the Gordon Conference on mycotoxins and phycotoxins in New Hampshire, where he presented a poster on the fate of microcystin in the environment. He also compared notes with several other chemo–phyco–toxico–logists (or whatever they call themselves), most notably Geoff Codd (in Dundee) and Hans Utkilen (in Oslo). Mad chemist Wolfgang Korth has cooked up another new internal standard for measuring concentrations of geosmin (a musty–smelling compound produced by cyanobacteria) in natural waters. This one is a synthetic racemic (+-) isomer (the natural compound is a – isomer). The

advantage of this standard is that you don't need a mass spectrometer to measure it, a FID gas chromatograph will do. And Brian Sorrell has finished two years working here with the artificial wetlands group, probing into the secret lives of macrophyte rhizospheres, He returns to MDFRC in September to continue work on oxygen and nutrient cycling in natural wetlands.

Inland Fisheries Research Station, Narrandera

In the depths of winter, with only the computer running hot, the biggest flood of the Murrumbidgee River since 1974 brought about "action stations" at the Research Station. Dedicated floodplain researchers, Peter and Paul (Mary was sick) positioned their nets in promising positions amongst bemused kangaroos on the dry floodplain. Commuting to work became more enjoyable on a make-shift ferry service while the highway was closed to traffic for four days. An unusual catch saw a short communication drafted in record time. Stay tuned.

The fish breeding season soon approaches with no obvious solution for controlling the conchostracans that plagued the fry rearing ponds in biblical proportions last year. The conchostracans are too large to be eaten by fish, cause high turbidity which lowers D.O. levels and quickly dominates the zooplankton via resting stage cysts. Advice from a conchostracan erradication expert is sought. Contact Stephen at I.F.R.S. With the shortening of the department's name good use is being made of the eight year old stationary that someone had the foresight not to throw out.

Murray-Darling Freshwater Research Centre

Mitchell's marauders are back wreaking havoc on the life in billabongs and streams again, after their exploits at ASL (well done Daryl and Robbie). Darren Baldwin, from ANU, has joined the team as Reseach Chemist and will manage the analytical laboratory. Darren's research will focus on the fate of chemicals added to the environment, and if time permits he will investigate the movement of metal ions through aquatic systems. While on organizational changes, Noel Fitzpatrick (MDBC) and John Langford (RWC) have joined our Board of Management. Kath Bowmer (CSIRO) and Peter Brinsley (WR) have joined our "Research And Technology Transfer Advisory Committee" (commonly known as the Rat-attack committee) as additional members.

Russel Shiel's lab has been taken over by New Zealanders. La-orsri Sanoamuany, a PhD student from University of Canterbury, Christchurch is here for six weeks to work on rotifers associated with specific macrophyte communities in billabongs. She has prepared the first scanning electron micrograghs of Australian/New Zealand rotifer mouthparts as a prelude to further systematic work on trans-Tasman variations in the group. John Green from Waikato University, Hamilton is spending his sabbatical at the Centre and will be

working on the ecology of zooplankton in our billabongs and temporary pools. John is calanoid copepod buff, who has an interest in their population dynamics, grazing, predation capabilities and resting stages.

Terry Hillman, Rob Cook and Peter Cranston have spent a week in Brisbane with Angela Arthington enjoying the sunshine, and when time permitted looked at the chironomids in Angela's controlled streams. Angela Dumesny, from Warrnambool campus of Deakin University has spent four weeks harvesting polyurethane blocks from a River Murray Billabong. Her study was to investigate the colonization of artificial substrates by protozoans, rotifers and microcrustaceans to provide a basis for a long-term study.

Rod Oliver has just returned from a holiday to Canada and United States. Between "Hanging Ten" at Waikiki and soaking up the sun at Miami Beach he managed to attended a symposium on the "Primary productivity and biogeochemical cycles in the sea" and present a paper at the annual conference of the American Society for Limnology and Oceanography. Rod also found time to visit freshwater laboratories in New York, Halifax, Burlington, Winnipeg, Saskatchewan and Hawaii.

Sydney Water Board

The Stream Studies Section of the Sydney Water Board is humming along with activity. The section is thinly disguised fitness camp, run by Bruce Chessman. The closer together contour lines appear on a map the more Bruce feels we need to sample a stream nearby. Michelle Boyd is becoming well acquainted with the Nattai River and cake shops in the Southern Highlands. Some of her sampling trips involve a cast of thousands, simultaneous sampling along the length of the Nattai River by day and night.

Ruth O'Connor is still attached to a PC writing the water chemistry of her study in the Blue Mountains. She is chaffing at the bit to begin looking at her invertebrate samples. Ian Wright has devoted a great deal of time to chironomid identifications and has discovered it is really easy, if you make the mesh size large enough only to catch freshwater monotremes and such like [you've been beaten to it, Ruth. See later in this issue for developments on this sampling technique - *Eds*]. Peter Swanson has discovered another use for his Katoomba artificial wetlands- they drown cats. But do they release phosphorus? Contrary to rumour Elvis Presley does not work in this lab as a trainee technician.

University of New England

We have had dry weather for the last six weeks and are all suffering from dehydration and lagoon withdrawal.

Michelle Casanova was last seen heading north to warmer places and the International Phycological Meeting (so she says). We're poised to turn up the heaters the moment she returns. Postcards reveal that she has, in fact, reached America, the land of charophyte people (we were worried that she may have been seduced by the wonders of Hawaii, and got no further).

Stuart Blanch, alias the Tadpole, is grazing on lagoon flora and mulling over project design, but shows no sign of losing his tail and becoming a real terrestrial. Dorothy Bell is still recovering from the sudden inundation of information at the ASL and ASPAB conferences which flushed out all half-formed ideas and replaced them with an influx of new ones. All requests for further discussion are met with a curt "go away! I'm writing my thesis!". Paul Lloyd is showing distinct signs of becoming a macrophyte person. After a recent trip to Mother of Ducks Lagoon, he was found in the lab, cooing over slimy bits of *Myriophyllum*, *Amphibromus sinuatus* and *Isolepis fluitans*, which were later lovingly planted in pots of mud.

Meanwhile Margaret Brock has been grappling with the experimental design of this year's seedbank trials and has relegated the terms "pseudo-replication" and assumptions of ANOVA" to the category of "blasphemy". Margaret has also been to Canberra arguing about wetland definition, classification and inventory. Did you know that we all "study" "wetlands" under the broad international RAMSAR agreement definition?

Department of Water Resources, Sydney

The first instalment from this reporter will be brief, thus leaving plenty of opportunity for more thorough expositions in the future (beware!!!). In an attempt to breach the gap between stream ecology and wetland ecology (invertebrate studies vs habitat/waterbird studies- thanks to Jenny Davis for this observation), Brooke Bengston and Russell Preece spent numerous hours sorting and identifying invertebrates (and the occasional real animal) from juvenile ibis regurgitation samples. This effort was part of a study undertaken by Michael Magrath on waterbird breeding in the lower Lachlan and Murrumbidgee Rivers last spring-summer (to be detailed in further reports). The greatest admiration is expressed to Brooke and Russell in coming up with the following results largely prior to dinner (based on % of total numbers): coleopteran adults-7, carabid adults-3.5, coleopteran larvae-4.8, hemipteran larvae-3.5, orthopteran adults-3.5, arachnids-10, lepidopteran larvae-7, dipteran larvae-3.5, FROGS-10, egg sacks(???)-3.5. Obviously 3.5% is the magic number for ibis.

Following his five month confinement at Hay (Hell and Booligal), including months of December and January, Michael has departed to University of Melbourne to undertake a PhD on cuckoos (yes there is a moral to this story). This has left the rest of us to more mundane duties. If John Hawking permits it the author may eventually enlighten the

readers on what other things environmental scientists do in a water management agency (besides going through identity crises) and who we faceless people really are. Cheers till then.

NORTH QUEENSLAND

Guest correspondent: Richard Pearson, JCU, Townsville, QLD

Our delectable reporter, Ros St. Clair, has departed Townsville. She, organised as ever, passed on the job to Paul Clayton; he, efficient as ever, is in the dunder fields (no relation to paddy), and so I have been prevailed upon to step into the void.

Much has happened since you last read (see P.S., below) of the north. We have got over the misprinting of our little joke (E should equal NC squared according to the theory of EMERGY), and over the editorial interjections about dunder (it is actually a contraction of "down under" - "d'under", and, being distillery waste, you can see the derivation, albeit obscure, of "dunder head").

We of the Australian Centre for Tropical Freshwater Research at James Cook University of North Queensland were very sad to farewell Ros, whose quiet charming manner and dulcet tones were a soothing influence on my lab. Moreover she brought a certain *je ne sais quois* to the lab's appreciation of bits of submerged stick (which she mystifyingly called Leptoceridae). She has followed her partner to Ballarat, just as he once followed her to Townsville - sublime to ridiculous, or vice versa? A city cousin twice removed?

There has been much activity in the field. Dunder is being applied to cane, and Paul Clayton and Vikkie Heffernan are applying themselves (with expert remote guidance from yours truly) to discovering its effects (if any) on aquatic biota, with funding from CSR. Bob Congdon and RP are pursuing studies of Burdekin floodplain wetlands with partnership funding from LWRRDC and the Qld Water Resources Commission: our able workers are Jacqui Nolen and George Lucaks who in the last two months have visited and sampled more than fifty individual water bodies; George simultaneously is starting a PhD to examine dynamics of phosphorus in cane fields and wetlands; Jacqui is simultaneously helping with RP's long-term studies of disturbance and its effects at Birthday Creek, our pet rainforest stream. The Burdekin wetlands are also being worked on by Lee Benson and Ian Roderick, both of whom are also pursuing higher degrees: Lee on the dynamics of organic matter in Birthday Creek and Ian on fish communities in Ross River.

Zoe Rosser is continuing her Honours project which is looking at the role of disturbance in Birthday Creek and a Eungella stream - her experiments involve the use of house bricks

as model rocks. She spends much of her time physically abusing the bricks in a sort of rock 'n roll frenzy. Meanwhile RP is continuing doing similar things with groovy tiles (which, despite our much more extreme conditions than occur in Victoria, have not yet been washed away) as part of an ARC funded study.

The pilot project on rainforest stream classification being undertaken by Ros St. Clair and RP is nearing completion, with Donna Kwan racing to finish sorting the last sample before she produces an incipient limnologist; if she doesn't finish we may hire a wet nurse. Bob Congdon continues the struggle to analyse his water samples from the Birthday Creek catchment, while Ray Volker and Alan Pomeroy are working up groundwater movement and discharge data for the catchment. John Faithful is continuing his studies on the hydrobiology of the Burdekin Falls Dam (Lake Dalrymple), surely the largest uniform volume of suspended silt in Australia.

Meanwhile the ACTFR is doing as it was told by AWRAC and is selling itself to the highest bidders for ecological and groundwater surveys, etc. We have been very successful at this, so much so that several of us have severe headaches trying to balance the weight of possums, honeyeaters and their habitats against our urges to do pure research (and, heaven forbid, write some of this research up). Hoping for a cure for said headache, one turned to the lucid prose of a certain Bill Williams (Australian Biologist, recent issue) to provide some soporific relief. Aarrgh! He does not have a good bedside manner - but nevertheless I urge you to read what he says. Perhaps a bout of study leave would help the headache - and maybe one could visit Adelaide. Still, we have been able to provide employment for several botanists and terrestrial ecologists as well as more limnological types, including Jane Orr, our chief resident invertebrate picker.

As part of the commercial success, Barry Butler has run an efficient analytical lab which will shortly move into the Centre's new premises and will take control of stunning new equipment, which hopefully will do what it is supposed to do within 12 months of delivery (why can't manufacturers supply $50,000 and $150,000 equipment that actually works? I can't see a car manufacturer getting away with what we have to put up with from instrument suppliers).

Back to the bush. Alan Webb and Norm Milward have continued their work on the fishes of various water bodies in Townsville and Thuringowa cities (see if you can find the latter on the map!), with particular attention being paid to the biology of Tilapia and other noxious species. Recent Honours projects have looked at the status and biology of the Lake Eacham Rainbowfish (Ken White) and at the swimming abilities of young barramundi (Chris Clague). Norm is pursuing with vigour his programme of crayfish ("redclaw") and barramundi rearing, with some success. Ross Alford and Steve Richards have completed three years fascinating work on tadpole communities in Birthday Creek; and Steve and RP have run experiments looking at tadpole impacts on community

variables in RP's artificial stream channels in Birthday Creek. Ross and Steve are suffering somewhat from VHS - vanishing herps syndrome - are our frog populations litorially croaking? [Hmm, competition - *Eds.*]

Fresh waters seem to be flavour of the month with the marine people with many of them falling over each other to try and do catchment process studies and nutrient dynamics studies and hydrodynamic modelling studies to examine the influence of terrestrial runoff on marine environments. Could be that some of "our" funds will go to "those" people. On the other hand, we may score some money from enlightened providers such as the Great Barrier Reef Marine Park Authority.

This has been a very personal look at news from the north, as befits a guest writer. Hopefully we'll drag in some non-JCU material for the next edition. In the meantime I'm off to Hong Kong - could be my last chance to see it in its natural state.

*P.S. Dear editors: has anybody ever told you that they actually read these columns? Maybe you should do a survey. You might ask at the same time, incidentally, how many people like the editors' "jokes". I do, of course....

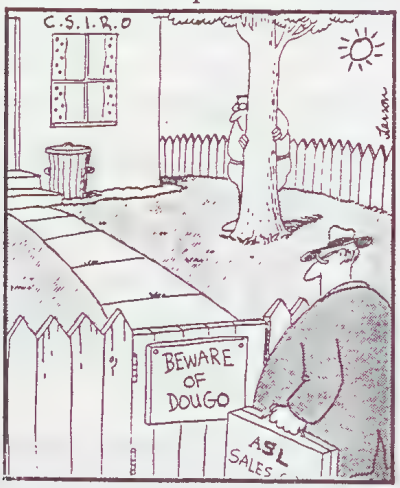
Editors' response: The answers to the above questions are "yes" and "at least three - i.e. us and you". Hope you enjoy Honkers, and if you see any nice, reasonably priced, over-proof Editorial Spirit as you pass through the duty free shop...

NORTHERN TERRITORY

Correspondent: Bob Pidgeon, Alligator Rivers Region Research Institute, Jabiru NT 0886.

During a recent walk along Magela Creek it occurred to me that there is nothing quite like a nice dry creekbed to give one that delicious feeling of complacency because there is at least SOME field work that cannot be done for the next five months. It was disappointing, then, to find on my return to Mecca that some crazed limnotic had decided that these same dry creek beds might hide some important scientific secrets that must be "unearthed". As a result the tranquility of the Magela sand dunes is to be disturbed by a newcomer to the NT, Rachel Paltridge from Adelaide. Rachel will soon be commencing an Honours project looking at sources of colonisation of invertebrates in dry creek beds of Magela Creek and the succession of fauna in the early Wet season. She will be based at ARRRI and supervised by Andrew Boulton of the University of Adelaide and Keith McGuiness of Northern Territory University.

There must be cheaper airfares available!



Michael Douglas has just arrived in the Top End to begin a Ph.D. on effects of forest burning strategies on aquatic communities in temporary streams of the Kakadu lowlands. Michael will be working with the CSIRO Tropical Ecosystems Research Centre at their Kapalga Research Station in Kakadu. He has the enviable (?) situation of being able to select his study sites without the encumberence of water. Michael hails from Monash and is another product of that unmentionable "A....." stream team. We hear that supervisors Drs Lake and Marchant are coming to pay him a visit and straighten out his heretical ideas gathered during a brief visit to ARRRI.

They're giving flights away!! Yet another welcome arrival in Kakadu is Michael Storrs, 'fresh' from the blow flies of Flinders Island, to work with Mick Julien (CSIRO Division of Entomology, Brisbane) on biological control of *Salvinia* on the Magela Creek floodplain. The project is funded by Australian National Parks and Wildlife Service. Their brief is to find out why *Cyrtobagus* weevils have not been as effective here as they have been everywhere else and, if possible, to rectify the problem. Michael is based in Jabiru and his lab and office facilities are at ARRRI.

Ross Hyne at ARRRI reports that his Toxicology section was successful in getting two of their pre-release toxicity tests, using *Hydra* and gudgeon embryos, passed for registration by NATA. A third test using Cladocera has been passed provisionally on the condition that a reliable algal food source be developed. Exotic algae cannot be brought into Kakadu National Park and so Armando Padovan (ex CSIRO, Griffith and NTU and other 'green pastures) has been contracted to isolate some pure strains of local algae and establish culture procedures for them.

Ross also advises that the proceedings of the symposia from the 29th ASL Congress in Jabiru in 1990 have been published and should have been distributed to all who registered. If you have not received your copy please contact Ross Hyne or the Executive Officer at ARRRI, Jabiru.

Well I didn't get my free flight and so, sadly, I missed the many smiling faces at Lorne (though I'll bet it was cold and wet). Hopefully I'll make it next year.

TASMANIA

Correspondent: Leon Barmuta, Department of Zoology, University of Tasmania, G.P.O. Box 252C, Hobart, 7001.

The drought has broken, snow fell (in very large quantities), and honours students scattered to retrieve broken bits of experiments.

Anyway, news here will be brief this month. At Inland Fisheries all those projects spoken of last newsletter seem to be getting off the ground, sometimes in a helicopter. Premek Hamr will be attempting to translocate some *Galaxias pedderensis* to a new home; hope they don't get airsick.

Back at the Hobart campus of the University, many honours and graduate students are looking worried, mostly project-related of course. In Geography and Environmental Studies, *Four Corners* star, Pierre Horwitz, is overseeing a variety of enthusiastic workers. Margie Brett continues her studies on eutrophication at Orielton Lagoon; Clive Jenkins has set himself the yummy task of examining the quality of urban stormwater and Graeme Ewing is attempting to monitor the Derwent Estuary using artificial substrates in the face of pummeling by floods and entrained wood fibre. In Zoology, Robert White's cloud of hons studes include Tim Ault examining habitat use by riverine galaxiids; David Donald investigating the influence of trout farm effluent on lotic macroinvertebrates, and John Waters who is attempting the mtDNA genetics of river blackfish populations. Meanwhile, Jane Andrews is rumoured to be writing up her thesis on genetic manipulation of cultured salmonids [shall we refrain from rotten puns about fish going to the opera? - *Eds*] while on sunny days Jenny Ovenden and Robert continue to try to unravel the phylogeny of the galaxiid fishes. Roy Swain continues to appear under stress while he hears about the latest catastrophe affecting Damien Scown's project on the effects of trout on little crustacean things or tall tales from David Oldmeadow's attempts to examine the effects of reducing stream flows during a winter flood. Alistair Richardson has the right idea: he has run away to Millport in Scotland for the rest of the year to chase amphipods.

Pete Serov has departed for oblivion in Sydney after wrapping up Alistair and Roy's project on forestry and streams, while Jean Jackson has joined the ranks of the employed as Leon Barmuta's research assistant on his near-bed flow project. Readers should note we have determined that Horne's Tuffwear do not make leopardskin waders - yet.

PAPUA NEW GUINEA

Correspondent: Ross Smith, Environment Department, Ok Tedi Mining Limited, P.O. Box 1, Tabubil, W.P., P.N.G.

Here in Tabubil, things have been hectic enough that most of us have not had time to scratch our nether regions [no comment - *Eds*]. Andy Markham and Geoff Day have been using very sophisticated methods to obtain inconsistent measures of stream flow (more on the acoustic doppler current profiler saga in future instalments) and Geoff has also been trying to come to terms with highly complex geochemical problems without the use of a lab, as the chemistry laboratory has been undergoing a complete renovation. Melinda Day has been rumoured to have been spending time chained to her Macintosh [how strange; aren't Macintoshes supposed to be A Joy To Use? - *Eds*] allegedly writing her thesis. She has now left the country for a while so that nobody can keep tabs on her progress. Jim Tait has been developing an intimate relationship with the hydroacoustic fish sampler, and is at the moment in Hobart telling the Australian Society for Fish Biology about the outcomes. The chemists around here have been enjoying themselves with the rebuilding of the lab and the purchase of new toys like top-of-the-line AAS. I have attended a couple of conferences lately that have not been particularly limnological. One was held by the Australian Institute for Mining and Metallurgy (I understood very little of what was said about the geology of ore bodies in PNG, but got my own back when I talked about environmental issues) and the other was the AMSA conference in Brisbane which had a special section on Torres Strait. Unfortunately I was spotted and could not function as an effective spy for ASL.

This has been a very parochial contribution, but the time allowed did not allow for the normal process of obtaining information from other PNG limnos. I would urge them to send contributions to me well before the next newsletter deadline if they receive their issues in time (slight dig at the editors there) [**SLIGHT??** - *Eds*].

WESTERN AUSTRALIA

Correspondent: Jane Growns, BES, Murdoch University, Murdoch, W.A. 6150

Jenny has had flu for weeks, I'm afraid, so she dobbed me in to write this even though I'm not a member - oops, pretend I didn't say that.

Adrian Pinder has officially left Murdoch as the Midge Project has finally finished (at last!), but he's still hanging around. Having recently tied the knot, he and Lynette are

going overseas for an indefinite period to exotica such as Nepal, India and (WOW!) England. Kerry now has a lab to herself as she labours to finish her Honours in Dec. Faye and I are still analysing data - there's too much to do! The project finishes in December and we are both planning long lazy days in the sun for next year. Unless any amazing job offers come up?

Jenny has yet another new PhD student (even if she's not official yet, she's working hard). Jane Latchford will be working on the environmental impacts of physical mosquito control modification in the salt-marshes south of Perth.

Declan Morgan has begun to take over the administrative tasks of the wetlands group, with the winding up of the 40 wetlands project. Does he know what he's letting himself in for, I ask myself?

Ivor and Mark are neck and neck with the theses and tripping over each other applying for post-docs. Shirley Balla is on 3 months sick leave and we all wish her the best and hope she will soon be back to full strength.

Congratulations to Humpers for being awarded his PhD in almost record time. Sounds a bit suspicious if you ask me - it wasn't that good (Sorry, Paul). Laurie Laurenson has submitted his PhD thesis and we wish him luck. Pancho Neira will be going back to Chile very soon, perhaps never to be seen again. What will WA women do without him? Luke Pen has been employed by the WA Waterways Commission and will soon be leaving for Albany.

SOUTH AUSTRALIA

Correspondent: Fran Sheldon, River Murray Lab, Dept of Zoology, University of Adelaide, G.P.O. Box 498, Adelaide, 5001.

[The Botany Department's contribution is a separte article entitled *Aquatic Botany Galore!! - Eds*]

Zoology Department, The University of Adelaide

It seems a number of limnologically orientated staff members have been exercising their writing skills. Prof Bill Williams has spent recent weeks (as well as teaching and acting as Chairman) writing a paper for the forthcoming International Conference on Tropical Limnology to be held in Hong Kong, 5-9/9/91. His paper is concerned with the sorts of constraints faced by tropical limnologists particularly with regard to the dissemination of

results and publication of material. Mick Geddes has just begun a period of study leave. Andrew Boulton has been writing up the work he undertook while in Arizona and preparing lectures and pracs for the third year limno class.

Jim Puckridge and Fran Sheldon are planning a trip to Cooper Creek in late September, Jim to continue his studies on freshwater fish recruitment postflooding and Fran to study diets of the gastropod fauna in this region, especially Viviparidae and Thiaridae.

Our flying Professor and Chairman, W.D. Williams returned to the USSR (where is that ??) during June in connection with his membership of the USSR/UNEP Committee concerned with the Aral Sea. This visit took him to Moscow for a few days and then on to Alma-Ata where the meetings took place. After Alma-Ata the UNEP Committee went to Kzyl-Orda to visit rice fields and look at the Syr-Darya. From Kzyl-Orda, the Committee went by train to Aralsk at the northern end of the Aral Sea. Further inspections of the Aral Sea were made from Aralsk and a public meeting held with local citizens. From Aralsk the Committee returned to Kzyl-Orda where further meetings were held.

Visitors to the Department include Dr N.V. Aladin (Leningrad, USSR) who arrived in Australia to attend the International Ostracod Conference held at Warrnambool, Vic. After the post-conference trip he spent a further week in Adelaide where he gave lectures on the Aral Sea and also on his scientific work concerned with osmoregulation. Dr Leon Barmuta, post ASL and ASPAB where he gossiped with a number of staff and visited the Barr (?).

Congratulations are due to Martin Thoms and Di Flett (formerly EWS State WaterLabs) who were married on 8th June 1991. Martin has recently left the Zoology Department to take up a lectureship in the Geography Department, University of Sydney, we wish them both all the best.

State Water Laboratories

Phil Suter has been kept off the streets, he recently ended up in Court defending the virtues of Wongulla Lagoon against a developer, the development has subsequently been rejected. He is also continuing his work on Lake Bonney in the SE which receives effluent from Apcel Pulp and Paper Mill and recently presented a paper on The Ecology of Lake Bonney SE to a public meeting at Millicent. He also attended a technical workshop in Canberra on *Wetland Inventory - Towards a Unified Approach*, organised by the ANPWS and BRR.

The River Murray Wetlands monitoring group continues the sorting of macroinvertebrate samples, as well as trying novel methods of getting 5+ years of bird observations off a

Commodore 64 database onto a PC, any suggestions greatly received (other than throw away the C64, which we have already received and considered..) [consider it again - *Eds*] Mike Burch is on leave and was last heard of gallivanting around the US and Europe. To pretend that he is doing some work he attended a conference on toxic Cyanobacteria in the US and will visit a number of research centres to discuss toxic cyanobacteria.

Peter Baker is progressing with his taxonomic work on filamentous cyanobacteria and was excited about getting some *Nostoc* from the wetlands and benthic invertebrate samples collected in Wongulla Lagoon.

NOTICES

UPDATE OF MEMBERSHIP DIRECTORY

The membership Officer, Margaret Hart, is currently working on a new version of the Membership Directory. To do this, she needs to know of any changes that have happened in the member's limnological lives over the past two years. So, anyone out there who wants any new information included in the directory should contact Margaret (the address is inside the front cover) with changes to:

Address
Any updated qualifications
New phone or FAX numbers
Changes or updates in interests

Remember, this directory is your record of what and who is happening in the ASL limnological world. Please help by sending Margaret any new information by Friday 18 October 1991.

CHILD CARE AT OUR ANNUAL CONFERENCES

Sabine Schrieber, Dept. Ecol. Evol. Biol., Monash University

Do your children influence your decision to attend an ASL conference?

It seems that more and more of our members have to cope with the practicalities of attending a conference and taking care of children at the same time. So it seems appropriate at this stage to investigate the needs and possibilities of childcare at our conferences. To be able to assess the needs for childcare we need your answers to the following questions, as well as any comments, suggestions etc. Please send these to

Dr Leon Barmuta, Dept. of Zoology, University of Tasmania,
G.P.O. Box 252C, Hobart 7001

1. Would you make use of some type of childcare offered at a conference?
2. How old are your children?
3. Would you require: a) fulltime care; b) sessional or part-time care; c) evening care?
4. Would you be satisfied if we hired a trained childcare worker and an assistant? (Presumably a trained childcare worker would be able to cope with a small group of children of various ages and needs, eg. does your child still require regular day-time sleeps?)
5. Would you be willing to supply some materials (eg. toys, books, some art and craft materials etc.) for your child/children?
6. Who do you believe should carry the cost of childcare (eg. the user, student and non-student users equally, the society, should it be covered by the registration costs of all members attending the conference)?
7. Do you have any other thoughts or suggestions on this topic?

THE FUTURE OF STUDENT PRIZES

Leon Barmuta, Zoology, University of Tasmania, Hobart.

The number and quality of student presentations at ASL Congresses have increased steadily since the inception of the Student Prize ten years ago. As a result of the extensive hand-wringing and nail-biting endured by the Student Prize Committee this year, they recommended to the AGM that the number of prizes be increased. At the AGM, Keith Walker made the welcome suggestion that the value be increased as well.

As a result, there will be three student prizes of $100 each available to be awarded at the 1992 Congress. They are:

1. Prize for the best oral presentation by a Ph.D. or Masters student.
2. Prize for the best poster presentation by a student.
3. Prize for the best oral presentation by an Honours student.

The Committee felt that a poster prize was necessary to encourage the use of posters as a means of presenting results and getting detailed feedback and discussion at Congresses; we recommended that future Congresses set aside a dedicated session with no competing oral presentations to establish posters as a viable (and often preferable) alternative to oral presentations. Posters in such sessions would be attended by the author, who would explain the presentation and field questions. The Honours prize was felt desirable because for a number of years members have opined that recent Honours graduates are less experienced at oral presentations and are therefore disadvantaged compared with other graduate students who have nearly completed their research. We hope this prize will encourage recent Honours graduates to attend Congresses and share their results with other members of ASL.

To guide the Student Prize Committees next year, it would be nice to formulate a set of rules for the prizes. Perhaps the most contentious issue would be eligibility. To start the ball rolling, I suggest that students should be current, financial members of ASL, and that they give their presentation within 18 months of receiving their degree. If you have any comments or suggestions about rules for student prizes, please forward them to the Secretary (Richard Marchant) or to me.

THE 1992 ASL CONGRESS

The next ASL congress will be held on the weekend after Easter from Friday 24th April through Sunday 25th at Bronte Park, about 1.5 hr drive from Hobart on the edge of the Central Plateau of Tasmania. Accommodation options are all close to each other and include camping, a hostel-style bunkhouse and a number of chalets with wood-burning stoves and separate rooms. We hope to make space for child care, so an early response to the questionnaire in this newsletter will help us plan for this nice and early. For those intending to combine ASL with a spot of holidaying, this area is close to areas that offer opportunities for walking, general browsing in all sorts of wonderful habitats (including real lakes), fishing, and testing out your wet weather gear.

We anticipate that costs will be similar to those at Lorne. Transport from Hobart will also be arranged for those requiring it.

We will try to keep concurrent sessions down to just two, and appeal to prospective delegates to consider the option of giving a poster presentation. We will dedicate one full session to posters where presenters will be there to discuss their work. No oral sessions will be concurrent with this session, in line with common practice overseas. Posters are a particulary good way to get lots of feedback about your work - more so than two hurried questions squeezed in at the end of a talk followed by some semi-coherent garble in the bar.

There are preliminary plans to organise a workshop for part of Friday on the effects of either forestry or flow regulation on freshwaters. If you have any other suggestions please contact the organisers soon.

We will provide more details next Newsletter. Meantime all suggestions and queries to:

Dr Peter Davies, Inland Fisheries Commission, 127 Davey Street, Hobart, 7000; phone (002) 23 6622, FAX (002) 23 4372.

LWRRDC RESEARCH AND DEVELOPMENT PLAN 1991-96

Leon Barmuta, Zoology, University of Tasmania, Hobart.

The Corporation (which superseded AWRAC, in case you've been asleep over the last 12 months) has released its R&D plan for the next five years. It is, mercifully, a thin document (18 pages with lots of brown space - it's on recycled-looking paper) and is essential reading for all interested in this Corporation for whatever reason. To get your copy, write to Dr Phil Price, Executive Director, LWRRDC, GPO Box 2182, Canberra, A.C.T. 2601.

I have read it myself, and have my own opinions. However, we editors would like to hear your opinions first, please. We know you are out there, we can hear you breathing. Remember, unless we bother the Corporation, they won't be bothered with us.

60 (SIXTY) MINUTES

12 July 1991 Executive meeting - Erskine House, Lorne. Vic.

Present: R. Norris, L. Barmuta, R. Marchant, M. Hart, S. Bunn, J. Hawking.

1) Student prize: L. Barmuta agreed to organise a committee to judge the student papers.

2) FASTS: S. Bunn will continue to liase with J. Middleton (AMSA) about FASTS matters and the future of the aquatic group of societies. It was felt that it would be to the ASL's advantage to have a FASTS representative in Canberra. The Secretary agreed to ask P. Cranston if he was willing to take on this role.

3) Annual subscriptions: After some discussion the following rates were agreed to:

   $25 - ordinary members
   $30 - institutional members
   $12.50 - student members.

   The new fees will cover the rise in FASTS fees (to $3.80 per member) and provide some additional funds for the society.

4) Sponsorship of SIL Congress in Adelaide: The society has been approached by a convention centre in Adelaide to determine whether the ASL is interested in sponsoring a SIL congress in 2001 in Adelaide. More information is needed before the executive can make a decision. This matter will be raised at the AGM.

5) Jolly award: Barry Hart has agreed to be the secretary that receives nominations for this award. Thus the paperwork goes back to B.Hart from the ASL secretary.

6) Special publications: The editor (S. Bunn) has received a request from the editor of the Fauna of Tasmania series (A. Richardson) for support (about $1000) in publishing I.Lansbury's key to Tasmanian Water Bugs. After discussion, it was decided that the ASL would support such publication as it was seen to be in the best interest of ASL members and was a cheap way of producing a special publication. The ASL would be acknowledged on the cover of the publications and it would be available to members at a reduced rate. S. Bunn will convey the above to A. Richardson.

7) FAX: M.Hart requested permission to buy a fax to facilitate society business. This was agreed to.

R. Marchant, Secretary.

14 July 1991 Executive meeting - Erskine House, Lorne. Vic.

Present: R. Marchant, S. Bunn, R. Norris, M. Hart, L. Barmuta, M. Brownlow, J. Chambers, R. Edwards, J. Hawking.

1) Student awards: After some discussion it was decided that up to three awards be given at an annual congress: one for the best oral presentation by a graduate student, one for the best oral presenation of an honors project by a student, and one for the best poster. Each award would be worth $100.

2) Conference guidelines: The secretary will prepare these with the help of M. Hart.

3) Possible SIL conference in Australia: B. Hart has offerred to investigate what procedures are required by the SIL executive (via G. Harris, the SIL Aust. representative) in putting forward a proposal to host a SIL congress.

4) S. Bunn & L. Barmuta will write to ACF and AWRC about research priorities of the LWRRDC and other matters of concern.

5) The ASL membership brochure and application form needs re-doing. R. Marchant & M. Hart will investigate this.

R. Marchant, Secretary.

WILL THE CENTRES SURVIVE?

Here is a copy of a letter to LWRRDC from the ASL President, as discussed at the AGM in Lorne.

"19 August 1991

Dr Phil Price
Executive Director
Land and Water Resources Research and Development Corporation
GPO Box 2182
Canberra ACT 2601

Dear Dr Price

At the annual general meeting of the Australian Society for Limnology, on 12-15 July, several issues were raised concerning the proposed initiatives of the LWRRDC and their implication for the future of the Centres of Concentration in Water Research.

As a result of these discussions I have been asked to express our profound concern over the LWRRDC's decision to terminate existing core funding arrangements for all Centres as of July 1992. The ramifications of this action are considerable and are likely to affect not only the viability of the Centres themselves but also the quality of research on our inland water bodies and their catchments.

The Centres of Concentration in Water Research were established by the Federal Government in recognition of the need for a coordinated research effort on our water resources. This initiative acknowledged a long history of neglect and inadequate research funding and received considerable praise from the scientific community. The original concept of the Centres was to consolidate the research activities of groups of aquatic scientists in key locations across the country. This was seen as a more effective strategy than a single freshwater research institute, viz the Australian Institute for Marine Science, and took into consideration the vast diversity of inland aquatic environments in Australia and management problems that in many cases are region specific.

The achievements of the Centres in the first four years of operation have been truly remarkable, however, it is questionable that this will continue without the financial stability provided by core funding. The key to the success of the Centres lies in their ability to retain a dedicated Director, a critical mass of scientists and in many cases students working together on specific research projects. Past experience has shown how difficult it is to

achieve this when funding of positions can be guaranteed only on a short-term basis, as is the case with two to three year competitive grants or consultancies. Not only is it difficult to maintain continuity under such circumstances, it is unlikely that such funding arrangements will enable Centres to attract high calibre research staff.

In many of the University based Centres, core funding is used in part to provide relief teaching for the Director and this is undoubtedly a contributing factor to their current success. Without this support, most Centre Directors will not be able to maintain their administrative and research commitments or their entrepreneurial activities. Funds generated through consulting activities are not reliable enough to enable this to occur.

Under the LWRRDC's new procedures for Research and Development funding, Centres will be able to obtain support from the Corporation primarily through competitive research grants. Such an arrangement, where Centres compete for limited funds, will undoubtedly see the end of existing and future collaboration between Centres, reducing the exchange of ideas, sharing of facilities and expertise. This comes at a time when the Centres are in a strong position to capitalise on earlier achievements and branch into collaborative programs. Such collaboration is clearly essential to address our country's serious generic problems.

The Centres offer a key resource for the Corporation. However, the momentum built up over the past few years will be considerably dissipated by staff losses and morale problems if they lose their financial stability. The continued success of the Centres of Concentration clearly is reliant on core funding. The decision of the LWRRDC to withdraw this financial support will jeopardise not only the viability of the Centres but also the contribution that key groups of researchers can make to the Corporation's Research and Development activities in water and catchment issues.

On behalf of the Society, I strongly urge the Corporation to reconsider this course of action and to demonstrate the Government's commitment to improving the long-term productive capacity, sustainable use, management and conservation of Australia's water resources.

Yours sincerely

Dr Stuart Bunn
President, Australian Society for Limnology

cc Dr David Widdup, FASTS
Representative Organisations, LWRRDC
Centre Directors"

REPORTS FROM THE 30th ASL CONGRESS 1991

THE PRESIDENT'S ADDRESS

Members may recall the previous ASL Congress at Lorne in 1986 where, between the tennis, croquet and a few scientific papers, we held a memorable celebration of the Society's 25th Anniversary. From what I can remember, amidst popping of champagne corks and raucous laughter, we marked the anniversary of the Society with the launch of The Book - "Limnology in Australia", edited by Patrick DeDeckker and Bill Williams. Many of you have a copy, or at least have seen one. It is notable of course for its cover design of what was claimed later in that evening to be a picture of Bill Williams' testicles. This was subsequently denied in a letter to the Editor of the Newsletter (Vol 24/2) though some confusion still reigns as to whose they actually were.

Well, here we are again, five years down the track, celebrating the 30th Anniversary of the Society. I thought I would take this opportunity to look at some of the things we have done as a Society particularly over the past year and offer some thoughts as to what we might do in the near future.

Most of us would agree that ASL offers quite a lot for its members. We regularly produce an informative Newsletter and I believe this is something we can be take considerable pride in. Much of the credit for this must go to the Editors who have worked tirelessly over the past years to maintain a high standard, often in spite of the almost complete lack of news from the members. The newsletter will only continue to be a success if the members use it to advertise, share their witty subaquatic jokes or complain about something (someone must be tired of Leon's jokes by now!). Remember, the Bulletin was regrettably discontinued as a regular publication of the Society simply because not enough members contributed.

The Society also offers its members a (generally) well-organised, successful and informative Congress every year. I know that some members voiced their dissatisfaction with having to return here to the same venue in such a short time but you have to admit that there are few pleasant venues to hold a conference in Victoria in the middle of winter! (Particularly ones with a good croquet lawn). There is little doubt though, that judging by the number of participants and standard of the presentations, once again the conference has been a great success. The conference organisers, particularly Margaret Hart and Richard Marchant, are to be commended for their efforts.

For these things alone, I think the Society does offer a great deal for its members. The membership fees (although these will come under scrutiny later in the meeting), are low compared with other Societies and particularly so considering what the members get in

return (a regular Newsletter, a much less regular Special Publication, reduced journal subscriptions and a cheap conference registration).

I believe we should try to increase our membership, and certainly at least prevent it from remaining static or declining as it has done in recent years. We can do this in a number of ways:

(1) Update our advertising material.

We should produce new membership forms and possibly posters depicting the activities of the Society and the research by its members. We have tried to get this off the ground by appealing for ideas and materials from the members (Newsletter 29/1). We had hoped that someone would have a suggestion for an alternative logo for our stationery but it appears that the old lungfish will have to do for another 30 years. (As far as I am aware none of our members actually works on them and probably most have never seen one.)

I think this is important, not only to recruit additional members but also to encourage students in tertiary institutions to enter research programs in limnology and to promote our science to a wider audience.

(2) Joint meetings with sibling societies

We should try to make it easier for members to attend Congresses of other Societies (e.g. ASPAB, ESA, AMSA, FBS) by coordinating joint or consecutive meetings. The Society undoubtedly has lost members because other Societies offer conferences more relevant to their particular area of expertise. Most members cannot afford to go to more than one conference a year, especially if they are held at different times and venues. Consecutive meetings should be encouraged. This may persuade more people to join the Society (after all, it is cheaper to become a member and receive the Newsletter etc, than to register at a conference as a non-member). It is difficult to organise joint meetings without them becoming unwieldy but other societies are keen to participate in consecutive meetings.

(3) Promote the Society in other areas

I suspect that many of our new members are either employees or students of existing members. There are many people in Government Departments and Industry, for example, involved in research or monitoring, and others making "management" decisions that can affect not only the state of our water bodies but also the funding of the research we do. Sponsorship of workshops as proposed by the Executive may also be another way of promoting the Society's activities. Rod Oliver has prepared

some draft guidelines for workshops (Newsletter 29/1) and members are encouraged to make submissions.

The Society is fairly well off in comparison to others, with about $35,000 invested and another $4000 in the operating account. While we do not wish to run into financial difficulty by depleting this resource base (see Kirk 1986, Newsletter 24/1) we have a strong financial base to undertake the above activities and others.

What other roles can the Society play?

During the last five years we have seen the creation of AWRAC as a reasonably significant source of funding for limnological research and, under this funding umbrella, the establishment or consolidation of a number of Centres of Concentration in water research. AWRAC of course is now gone, replaced by the Land and Water Resources Research and Development Corporation (LWRRDC) which carries with it not only the responsibility for funding water research but also research on land and vegetation. What this means for fate of research funding on our aquatic ecosystems is not yet clear.

The Society does not have a representative on the Board of Directors of the LWRRDC. One of our members (Angela Arthington) is, however, on the Board of the Corporation and it is important that we use this link to voice our concerns and ideas, either as individuals or through the Executive. Members of ASL contributed to defining the research priorities of AWRAC. Very soon, the LWRRDC is going to release its recommended priorities for research. The executive called for comments and suggestions from its members (Newsletter 28/4) on the original research priorities, drafted by Lake, McComb and Cullen. Once again, we received absolutely no comment. Members are either all completely happy with the previous list of priorities, or they don't care and/or they don't think it makes one bit of difference what the suggested priorities are. I must confess to belong to the latter group, but I still think it is important to try to direct the funding of research to areas that WE think are important. Many of us complained and were quite disillusioned by the lack of research money AWRAC had and by way in which it distributed its research money. We will have ourselves to blame if the LWRRDC spends most of its money on erosion control and tree planting.

Our recent experience with the LWRRDC indicates that the Society has little influence in matters that concern funding of aquatic research. This is where we might hope to rely on FASTS to lobby on our behalf, and perhaps justify our continued contribution as full members. We were able to use FASTS for the first time, to lobby the Minister for Primary Industry and Energy for inclusion as a representative organisation of LWRRDC. Unfortunately, they were not able to convince him that the LWRRDC required any further representation of the scientific community than it already had. However, ASL may

be able to rely on FASTS more in the future to represent us in such matters. Together with the other aquatic societies, ASL could become part of an aquatic science coalition and use FASTS to lobby on our behalf to ensure adequate funding for aquatic research and other issues. In this way, we could pursue these objectives without direct involvement and without losing those values (informality, camaraderie) the Society has cultivated over its 30 years. Certainly we would need to see a more substantial return from FASTS than we have to date if we are to remain as full members. Our continued involvement in FASTS will be discussed later in the meeting.

The ASL does have a lot to offer its members but there is still much we can do as a Society. Our membership has been static over the past few years and we hear little from the members we do have. Our Newsletter editors have often complained "is there any body out there?" and often receive nothing more than the regular contributions of one or two members. The Bulletin ground to a halt because of the lack of contributions. The executive has hoped to promote the Society but no one has offered any suggestions or materials. We ask for suggestions for research priorities to put forward to one of our major funding bodies and there is no response.

It really is up to the members to participate in these activities and in doing so, ensure the Society's continued success. If you don't have the time or energy to contribute directly, do so by contacting your State representative. The executive of the Society now includes representatives from each State and Territory. Members should make certain they nominate someone they feel will truly represent them and someone who is prepared to work hard on behalf of the Society.

If the Society is going to continue successfully for the next 30 years, it will only be because of the combined efforts and support of ALL of its members.

Stuart Bunn July 1991

HILARY JOLLY AWARD 1991

The Hilary Jolly Award for 1991 has been made to Professor Arthur McComb of the School of Biological and Environmental Sciences at Murdoch University.

Professor Arthur McComb has contributed to Australian Limnology in a variety of ways.

He has made a major research contribution to Limnology through his interests in the control of growth in aquatic plants. This work grew partly out of his early work on the occurrence of hormonal growth regulators in algae and their activity in aquatic plants while working at Michigan State University.

He, and his students and associates, in association with State Government Departments in W.A., have carried out two major aquatic research programmes and one on Cockburn Sound particularly in relation to sea grasses, and one on the Peel-Harvey Estuary which examined the causes and processes of eutrophication in that system. The two studies are a credit both to Arthur and the Government Departments illustrating that good ecological science and applied ecology are not mutually exclusive categories and the utility of their results illustrates the value of well thoughout, properly conducted, and adequately funded applied ecological studies.

Arthur's scientific work has resulted in over 100 scientific publications. There are 3 further areas of limnology in which Arthur has made significant contributions.

Firstly Arthur has facilitated research by others. As joint foundation director, with Professor Jorg Imberger of the Centre for Water Research, an interdisciplinary centre attracting more than $2m per year from State Government agencies, he helped establish and administer a facility which has supported the work of many limnologists in Western Australia, assisting in changing a limnological drought in Western Australia to a flood.

Secondly as an educator - through his role as Professor of Botany at the University of Western Australia to 1986 and currently as Professor of Environmental Science at Murdoch, he has had a significant impact on biological education in Western Australia. But more specifically as supervisor of over 10 limnological graduate students he has made a significant impact on limnological education in Australia.

Thirdly, Arthur has played a significant role in limnological extension activities. Convincing government agencies and the public of the value and importance of limnological studies and the need to conserve aquatic ecosystems. He has done this through activities on government and semi-government committees, through public

lectures and presentations to public meetings and through production, with Dr P S Lake, of the book "Australian Wetlands".

Professor McComb is a worthy recipient of the Jolly Award.

REPORT OF THE 1991 STUDENT PRIZE COMMITTEE

Leon Barmuta, Zoology, University of Tasmania, Hobart.

The large number and high quality of the student presentations at this year's Congress presented real problems for the Student Prize Committee, not the least of which was finding enough judges who didn't have their own students giving a talk. Eventually a committee of six (Jane Roberts, Paul Boon, Ian Campbell, Pierre Horwitz, Kim James, and me) ran themselves ragged around the three concurrent sessions keeping up with all the talks.

The winner was Ben Gawne from Monash University, Clayton who talked about "The microdistribution of a grazing caddisfly larva (*Agapetus montecoleus*) in response to periphyton abundance". The Committee was also pleased to have donated to it a copy of "Waterplants of New South Wales". We decided to award the book as a special encouragement to Stuart Blanch from the Botany Department , University of New England. His paper entitled "Just how many rice-weed seeds are there in irrigation water?" was presented with special verve and clarity, and he hasn't even started Honours yet. Congratulations to both Ben and Stuart.

REPORT OF THE DOOR PRIZE COLLECTIVE 1991

The door prize award speech given at the AGM by a member of the Door Prize Collective.

"It came as no surprise to the members of the Door Prize Collective to see the name of John Bywater mentioned in the last ASL Newsletter in regard to his recent promotion. For those of you who attended the Jabiru congress last year will remember that John won the Door Prize for that year. It has become obvious in recent years that the Door Prize can be associated with a rapid rise in a persons career: winning the door Prize is, in fact, a good career move. If you compared the winners of other ASL awards, this point is even more obvious. Look at the winners of the Jolly Award. After receiving that prestigious award, one could say that their careers have stalled and little promotion has followed.

With this in mind, the Door Prize collective takes its task very seriously, knowing that the award may result in instant career success.

Hence, just before the Annual General Meeting, the Collective (comprising several members who, for some unknown reason, wish to remain anonymous) met to discuss the award and eventually, after long discussion, unanimously selected a winner.

A little later, a sub-committee met in secret and produced a dissenting majority report. This report stated that there was someone else who should have been considered as worthy of winning the title of Door Prize. This person was nominated under the category of best fashion statement of the conference and the citation read "...For services to clothing made from threatened species, sheer gall and lack of self conciousness ...". That person was Leon Barmuta, who, for those not fortunate(?) enough to be present at his talk, stalked the podium dressed in a leopard skin (imitation) jump-suit and red socks. The dissenting report notes that under normal circumstances, such behaviour would have been enough to secure the Door on Saturday (thus leaving the Collective with free time in which to enjoy themselves, rather than suffer the agony of deciding such a major prize).

Unfortunately, Leon had to be disqualified from the prize, for three reasons. Firstly, it is not allowed that a member of the Collective actually wins the prize (ostensibly to prevent corruption and collusion among the Collective, but if you knew who the Collective was, you would understand why they disqualify themselves - it would make the award a foregone conclusion each year). Secondly, Leon made the fashion *faux pas* of wearing red socks with the leopard jump-suit, when everyone who reads Ita (the magazine for women who weren't born yesterday) knows that purple sock are *au compulsoriare* clobber when worn with leopard print. And finally, it was decided that such a blatant attempt to further one's career by obviously ostentatious behaviour should be rewarded by the failure of such an attempt. The sub-committee congratulates Leon on his effort, but must only award him a special mention. Which, judging from history has no perceivable advantageous effect of career prospects.

And so to the nominations for the door prize for 1991:

- To Shane Brooks for a masterful demonstration of how the Boulton suck sampler actually does "suck" (we all knew that, but didn't want to upset Andrew by telling him). Unfortunately Shane tried to convince us that collecting more bugs to sort and identify is somehow more efficient.

- To Sam Lake, the man who brought you the comment that "it's hard to get orally excited about hairs on bums". Anyone who heard his review of the film 'The Hot Spot' in the pub on Friday night will understand the nomination.

- An anonymous nomination was recieved for Daryl Neilson, but the laws of libel and fears for the safety of the Collective prevent any further revelation.

- Statistical awards are presented to Dave Robinson for the 'Pencil Of Best Fit' technique of showing data trends and to Barry Hart for a new technique in determining error bars around data points. This consisted of drawing lines at random on an overhead projection sheet and rotating it on top of the data until the lines actually intersected the data points (nice one, Barry!)

- A special mention to the anonymous person who left a single surgical glove outside one of the caravans on Saturday night (it was still there on Monday). No search was undertaken to find the remaining glove.

- Various nominations were made to Paul Wettin for services to the local picture framing industry, to Dominic Hodgson for swimming skills (last seen, he was still looking for lost parts), and to a Mr. Rathbone of Apollo Bay for services to stream conservation and management.

All these are worthy of winning, but, as with any competition, there can only be one winner. And this year, the Door Prize (and the associated boost in career prospects) goes deservedly to Nick Drayson. Nick started his quest for the prize by systematically losing a type specimen of the genus *Cricotopus* (if only we could get rid of them all!) during his presentation (fraud, fake, we hear you cry). And then carried on by actually convincing Peter Cranston to pose as a chironomid pupa for the purposes of a demonstration (almost a nomination in itself) , but capped off the prize by using full bottles of Coopers beer as substitutes for pupal horns in the demonstration. Anyone with mental processes that operate like that is a valuable member of the society and a worthy recipient of this years Door Prize. Well done every-one, and congratulations Nick. "

A NEW SAMPLING TECHNIQUE EVEN BETTER THAN BROOKS

Whilst browsing through a recent edition of *Hydrobiologia* (Vol 210: 151-160), a sharp eyed reader and member of the Society came across a method guaranteed to reduce sorting time, increase the number of possible replicates, and take away those constant fears of contagious distributions and messy transformations. A simple technique, it does not require muscle power to pump samples, nor electronic batteries. I quote from the methods: "At each station, five samples of littoral macroinvertebrates were obtained using a hand-held mesh *(mesh aperture 1 m^2)* and sweeping marginal vegetation and detritus for

2 minutes per sample." [Our italics! - *Eds*]. Quite clearly, the mesh size involved would solve all known problems in freshwater ecology or survey. No more sorting, none of those confusing taxonomic dilemmas.

And the developers of this new revolutionary technique? None other than Williams, W.D., Taaffe, R.G. and Boulton, A.J. Knowing that the demise of the 'suck' sampler was imminent, the intrepid Boulton and Co. obviously rushed to develop a new and better method than the recently accepted standard (which is probably passé already) Brook's Electronic Alternative Suck Technique (BEAST) - Batteries Not Included.

We all look forward to the formal presentation of this new technique, and the entertaining but ruthless decimation of the BEAST that is sure to be seen at next year's conference.

"I've had it, Doc! . . . I've come all the way from Alabama with this danged thing on my knee!"

CONFERENCES AND WORKSHOPS

A REPORT ON THE NABS MEETING, SANTA FE 1991

by the now "computer-literate" P.S. Lake, DWEEB, Monash University

Across the Pacific with a smooth flight, "Memphis Belle" as the cheering video, everything was fine until Los Angeles. There because of long delays at Immigration (several jumbos of Koreans and Brazilians had taxed the authorities), I missed on-going flights. However at last in the early morning I reached Santa Fe in cold rainy weather (a reminder of Melbourne). On the almost empty shuttlejack bus from Albuquerque, I travelled with a wealthy Russian emigre surgeon from Florida who had just sold his practice, abandoned medical "plumbing"and was coming to the Santa Fe-Taos area to embrace alternative medicine. The Santa Fe region is a mecca for fringe religions, new age philosophies, art colonies, alternative medicine and rich Americans seeking to come to terms with the fading indian culture

The conference was at the College of Santa Fe - a small rather spartan college. Indeed my room had a very monastic feel about it (I forgot my hairshirt) with the walls enlivened by legible graffiti - "Be happy, Be Hopi !". The conference began with a well-structured workshop on the hyporheic zone. Work in this habitat is shaping up as a major "go" area with perhaps the important insights coming not from a consideration of the fauna *per se*, but from unravelling nutrient pathways and microbial functioning. On the Tuesday night at the Plenary session, David Allan addressed the most timely matter of biodiversity in running waters and lamented the lack of research in this area - this strange feature of stream ecology was very evident at the conference by the dearth of papers in this area. Stuart Fisher gave a measured and insightful paper with a clear depiction of the ideal relationship between a postgraduate student and the supervisor.

Throughout the conference, and partly organized by Tom Dudley, was a Symposium on Aquatic Biology in South America. This symposium with a wide variety of papers (many understandably on taxonomy and distribution) was a great success and poignantly stressed the difficulty of carrying out ecological research in the impoverished nations of South America.

Over the conference I attended a wide array of papers with particularly enlightening ones on grazer-periphyton interactions, assemblage interactions (direct and indirect), carbon dynamics, stream research at the Long-Term Ecological Research (LTER) sites, catchment geomorphology and streams and disturbance (of course). On the Thursday in a very

steamy and almost drinkless Alumni Hall, there was a very lively Poster session. Many people attended, questioned, discussed and argued - it was a stimulating Poster Session.

Scanning the scape of North American stream ecology as indicated in this conference, the rising new areas seem to be the hyporheic zone, community interactions, periphyton ecology, and the links between catchment morphology, climate and stream processes. Perhaps in the latter area, with G.I.S. and sophisticated mapping technology, we may be seeing a transfiguration of the RCC concept.

Santa Fe is a very pleasant conference venue - good mexican food, southwest indian art, great scenery and an interesting hinterland (Taos, Los Alamos). On the Thursday night the annual dinner was held in a film studio and as opposed to most A.S.L. conferences (excepting the Goanna Brothers aberration), a live band provided very danceable music (in the Western Swing-early Rock genre). Also as opposed to some A.S.L. dinners, drunken mayhem was not evident though on the way back to college I did espy a very enthusiatic sampler in a temporary pond. The conference ended with a fast raft trip down a flood-swollen Rio Grande, a fairly smooth trip as in comparison with a New Zealand trip I was not thrown out by my colleagues.

AQUATIC BOTANY GALORE!!

Workshop on water levels and wetlands at Bool Lagoon, and the ASPAB Conference and statistics workshop, University of Adelaide, July 1991 .

Marcus Brownlow, Department of Botany, University of Adelaide.

After the success and stimulation of the ASL conference in Lorne, the Adelaide botanists braved the cold to hold a post-ASL, pre-ASPAB field trip to Bool Lagoon. George Ganf should be congratulated for his sterling efforts in bringing together scientists and managers in an informal atmosphere to discuss the issues and problems associated with wetland management. The trip consisted of a brief examination of swamps ranging from the pristine sedge-dominated Deadman's Swamp, to the progressively deeper water basins of Bool Lagoon and Hacks Lagoon, with their floating and fleshy flora. A broader perspective was allowed with a tour of upper South East wetlands on the way back to Adelaide.

The managers were represented by members of the S.A. National Parks and Wildlife Service and Woods and Forests Department; the scientists came from the Adelaide, New England, Deakin and Tasmania Universities, CSIRO Griffith, MDFWRC and the

Dandenong Water Authority. After a day in the field, the congenial atmosphere of Killanoola homestead allowed the scientists and managers to see each others' perspective on the same problems. It was also an invaluable experience for students, and all attendees agreed that the two days had been successful and well spent.

The Australasian Society for Phycology and Aquatic Botany (ASPAB) held its annual conference at Adelaide University in June after the ASL conference and Bool Lagoon field trip. Of particular interest to the aquatic botanists was the opening wetlands session, where a status review was presented by Margaret Brock on wetland seed bank and propagule studies, and Michelle Casanova on charophyte life cycle attributes. George Ganf's group presented some of their work on *Triglochin, Typha* and *Phragmites* in Bool Lagoon. Western Australia was well represented by a series of posters detailing salt lake algal communities, and the use of both diatoms and algae as biological indicators of water quality.

Post-ASPAB the Botany Department was the scene of the visitation by experimental design icon Tony Underwood, who pointed out to the assembled gathering of Fisheries scientists and botany and zoology students: 1) the failings of their perfect experimental designs, 2) the slap-dash style with which most hypotheses are generated, 3) the dubious quality of commercial statistical packages, and 4) how much effort is really required to design and implement a really good experiment (592 identical hand-carved rock pools for example!). The four day session was a rigourous coverage of Analysis of Variance, ranging from necessary assumptions to manual calculation of ANOVA tables. The course was excellent,and has had its effect already. We now critically review experimental designs, rather than hope that good hypothesis testing is merely a function of a few extra replicates!

ANNOUNCEMENTS

A conference on **Wetland and Waterfowl Conservation in South and West Asia** is to be held in Karachi, Pakistan, between 14-20 December 1991. The provisional programme includes sessions on the status of Asian wetlands and waterfowl, Wetland conservation and management, Research needs, and International cooperation and action. An excursion to Haleji Lake is also planned. Additional information from IWRB, Slimbridge, Gloucester, GL2 7BX, UK. Registrations are due by 30 September 1991, abstracts by 31 August 1991 (whoops!).

The Second Environmental Chemistry Conference on **Chemistry and the Urban Environment** will be held at Monash University, Caulfield Campus, Melbourne, between 9-12 February 1992. The program will encompass environmental issues such as Water and Air Pollution, Occupational Health, Soil Contamination and Environmental issues. Information and registration forms are available from 2EC Secretariat, Water Studies Centre, Monash University, PO Box 197, Caulfield East, VIC 3145. Abstracts for papers are due by 30 September 1991. Registrations no later than 1 December 1991.

The **7th International Symposium on Trichoptera** is to be held at Umea, Sweden, between 3-8 August 1992. Further information and registration forms available from Dr. A. Neboiss, Department of Entomology, Museum of Victoria, 71 Victoria Cres., Abbotsford, VIC 3067. Registration forms and abstracts should be submitted by 31 December 1991.

Melbourne's 1st International Aquarium Conference on the Fishes of Australia and New Guinea will be held at the Dorset Gardens Conference Centre on Saturday and Sunday, October 19-20 1991. It features a range of lectures by top international and Australian Fisheries Scientists and Aquariasts/hobbyists. Cost is $80 for both days, or $45 for one day. For further details or reservations, ring (03) 3915225 or (057) 742330 in Victoria, or (074) 966649 or (07) 2056010 in Queensland.

The **2nd National Conference on Australian Recreational Fishing** will be held in Canberra between 23-25 October 1991. The aim of the conference is to promote the development of a national direction for recreational fishing and fisheries management in Australia, by reviewing the key issues and identifying policies required to address these key issues. Details from the Australian Recreational Fishing Conference, Centre for Continuing Education, ANU, GPO Box 4, Canberra City 2601 or phone (06) 2494580 or FAX (06) 2573421. Closing date is 11 October 1991.

A Workshop on Sampling in Aquatic Environments: Collecting Valid and Representative Samples will be held at the University of Canberra between 29 April and 1 May 1992.

Topics to be addressed include the physical, chemical and biological sampling of waters and sediments, the design of sampling programs, quality control to ensure representative samples and maintain integrity, sample storage procedures and innovations in the collection of water, biota and sediment samples. Enquiries can be directed to Dr. Bill Maher or Richard Norris on (06) 2522561 [FAX (06) 2015030]; Dr Simon Apte (02) 5433723, or Graeme Batley on (02) 5433325 [FAX (02) 5436774]. The approximate cost will be $150.

New services from the Freshwater Biological Association. The FBA now offers a document delivery service where copies of papers or 10% of any mongraph held by their library can be ordered and delivered by airmail. The service appears to be a bit like the Request-a-Reprint service offered by the publishers of *Current Contents*. For members of the FBA this service costs £40.00 for a pack of 10 requests. A new bibliography has been published: *Climatic Change- a bibliography* which covers over 150 recent references on both terrestrial and aquatic aspects of this topic. Cost: £5.00 for FBA members, £10.00 for non-members. For further information, FBA Library & Information Service, The Ferry House, Far Sawrey, Ambleside, Cumbria, UK LA22 0LP.

The 2nd International Conference on Reservoir Limnology and Water Quality will be held in Ceske Budejovice, Czechoslovakia between August 9-14, 1992. The scope of the conference is to document a progress in understanding reservoir limnology and water quality management during the last five years (since the first conference). Topics include Key factors in Reservoir limnology; geographical aspects; biological interactions; eutrophication; decomposition; modelling; and tropical reservoir fisheries. Details and pre-registration forms from: Dr. V. Vyhnalek, Hydrobiological Institute, Na sadkach 7, 370 05 Ceske Budejovice, Czeckoslovakia before 30 December 1991.

A 4th Taxonomy Workshop on Australian Freshwater Coleoptera (Beetles) is to be held at The Murray-Darling Freshwater Research Centre between 11-12 February 1992. Guest speakers will be Drs. John Lawrence and Andrew Calder (ANIC), Dr. Chris Watts (SA Museum) and Ms Alena Glaister (Monash University). Sessions will cover Identifications to the family level, followed by more detailed examinations of the Families Dytiscidae, Hydrophilidae and Elmidae. Cost will be $35 ($20 for students). Those who attended the previous workshops will appreciate the value this represents. Enquiries to John Hawking, MDFRC, PO Box 921, Albury, NSW 2640. Phone: (060) 431002.

CONSERVATION OF NON-MARINE INVERTEBRATES IN AUSTRALIA

The Invertebrate Survey Department of the Museum of Victoria has been contracted by the Australian National Parks and Wildlife Service, under its Endangered Species Program, to undertake an overview of the conservation of non-marine invertebrates in Australia.

The overview will attempt to develop strategies to conserve the non-marine invertebrates, and comments from interested individuals and organisations on the following topics are sought.

- Background information on Australian non-marine invertebrates: number of known species and number of estimated unknown species
- Conservation legislation
- Review lists of threatened/endangered taxa and invertebrate communities
- Threatening processes
- Invertebrates associated with particular Australian habitats
- Significant invertebrate habitats/ sites of invertebrate significance (hot spots)
- Indicator and flagship Taxa
- Research priorities for conservation
- Management priorities for conservation
- Invertebrate surveys
- Past and present invertebrate conservation projects.

Should anyone be interested in commenting on this project or require further information please write to Alan Yen or Rhonda Butcher at:

Museum of Victoria, Department of Invertebrate Survey,
71 Victoria Crescent, Abbotsford VIC 3067
Phone: (03) 4195200

LIMNOLOGY BIBLIOGRAPHY

Readers may be forgiven for presuming that ASL members are unproductive or in hibernation. Giving said members the benefit of the doubt, I am assuming that you are all too busy to send copies of publications, reports, etc, or even a handwritten (!) list of titles and bibliographic information. (To: Russ Shiel, MDFRC, PO Box 921, Albury, 2640 for Russ Tait, Keeper-of-the-Bibliography, *in absentia* [or rather, in Anchorage, still scrubbing]). The following caring members have.....

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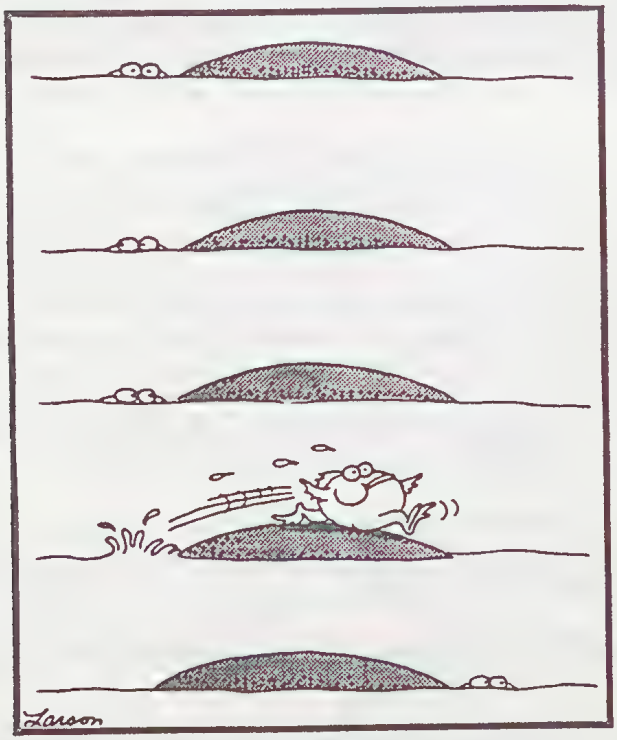

Another great moment in evolution

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